

CLAIM AMENDMENTS

Claims 1-7. (canceled)

8. (currently amended) An anchor molecule for generating a biospecific boundary layer on a surface, comprising at least one structural unit X, which is capable of immobilizing the anchor molecule on the surface, as well as at least one structural unit R, which enables ~~the~~ formation of a self-assembled monolayer on the surface and is terminally functionalized by a group A for binding to a ligand or a non-ligand, said anchor molecule being immobilized on a solid phase.

9. (original) The anchor molecule according to claim 8, wherein R is a branched or unbranched, optionally substituted, saturated or partially unsaturated hydrocarbon chain which may be interrupted by heteroatoms, aromatic or heterocyclic units and comprises 2-2000 atoms.

10. (previously presented) The anchor molecule according to claim 8, wherein R comprises a hydrophobic structural unit R¹ which is formed by a branched or unbranched hydrocarbon chain of 1 to 50 carbon atoms which may be saturated or partially unsaturated.

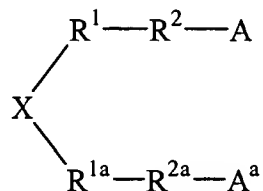
11. (currently amended) The anchor molecule according to ~~any of~~ claim 8, wherein R comprises a branched or unbranched hydrophilic spacer R² which is formed by a hydrocarbon chain, which is interrupted by heteroatoms and comprises 2 to 1000 carbon atoms.

12. (currently amended) The anchor molecule according to ~~any of~~ claim 8, wherein the structural element X comprises at least one element of main group V or VI of the periodic table.

13. (original) The anchor molecule according to claim 12, wherein X is a disulfide, thiol or sulfide group.

14. (currently amended) The anchor molecule according to ~~any of~~ claim 8, wherein A is a hydroxyl, amino or carboxyl group.

15. (currently amended) The anchor molecule according to ~~any of~~ claim 8, having the following general structure



wherein R^1 and R^{1a} are independently defined as R^1 in claim 10;

R^2 and R^{2a} are independently defined as R^2 in claim 11;

the groups A and A^a are independently defined as A in claim 14; and

X is defined as in claim 13;

and wherein one or two structural units arbitrarily selected from R^{1a} , R^{2a} and A^a are optionally not present or the combination of R^{1a} , R^{2a} and A^a may completely be replaced by a hydrogen atom.

16. (currently amended) The anchor molecule according to ~~any of~~ claim 10, wherein R^1 and ~~optionally R^{1a} have~~ has the structure $\text{---}(\text{CH}_2)_n\text{---}$, n being an integer from 1 to 50.

17. (currently amended) The anchor molecule according to ~~any of~~ claim 11, wherein R^2 and ~~optionally R^{2a} are independently~~ is an oligoamide and/or oligoether group.

18. (currently amended) The anchor molecule according to ~~any of~~ claim 8, additionally comprising a functional group Y, which results from the linkage of the anchor molecule to a solid phase.

19. (original) The anchor molecule according to claim 18, wherein Y is a carboxylic acid, carboxylic ester, carboxamide, aldehyde, hydrazide, hydroxamic acid, hydroxy, hydroxyalkyl or diketopiperazyl group.

Claims 20-22. (Cancelled)

23. (Withdrawn - original) A method for the production of a ligand-anchor conjugate, comprising:

immobilisation or synthesis of an anchor molecule on a solid phase which is suitable for chemical synthesis;

b) synthesis of a ligand on an anchor molecule or binding of a ligand to the anchor molecule; and

c) cleavage of the formed ligand-anchor conjugate from the solid phase,

wherein the anchor molecule comprises at least one structural unit which is capable of immobilizing the ligand-anchor conjugate on a surface, as well as at least one structural unit which enables the formation of a self-assembled monolayer on the surface, and which is terminally functionalized for binding with a ligand or a non-ligand,

and wherein the ligand should allow interaction of the surface with a receptor.

24. (Withdrawn - original) The method according to claim 23, wherein a multitude of different ligand-anchor conjugates is generated using combinatorial methods for ligand synthesis.

25. (Withdrawn - previously presented) The method according to claim 23, wherein the solid phase used for synthesis is a synthesis resin, a synthesis polymer film or a silicon or silicate surface.

26. (Withdrawn - original) The method according to claim 25, wherein the solid phase is a synthesis resin, selected from a hydroxy resin, an amino resin, a trityl resin, a dihydropyrane resin, a carboxy resin or an arylsiloxy resin.

27. (Withdrawn - currently amended) A method for providing a biospecific boundary layer on a sensor surface, comprising the production of ligand-anchor conjugates according to the method of claim 23, ~~any of claims 20~~ and additionally comprising the step of contacting the obtained ligand-anchor conjugates with the sensor surface.

Claims 28-34 (cancelled).

35. (new) The anchor molecule according to claim 15, wherein R^1 and R^{1a} have the structure – $(CH_2)_n$ -, n being an integer from 1 to 50.

36. (new) The anchor molecule according to claim 35, wherein R^2 and R^{2a} are independently an oligoamide and/or oligoether group.